



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/751,121	01/05/2004	Christopher Paul Mercer	13047.374	1369

7590 08/02/2005

Thomas P. Liniak
Liniak, Berenato & White
Suite 240
6550 Rock Spring Drive
Bethesda, MD 20817

EXAMINER

GLEITZ, RYAN M

ART UNIT	PAPER NUMBER
----------	--------------

2852

DATE MAILED: 08/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/751,121

Applicant(s)

MERCER ET AL.

Examiner

Ryan Gleitz

Art Unit

2852

(PM)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>1/05/04</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities:

“a rotational driving force of fairly high” should be --a fairly high rotational driving force.--; and

there is no brief description of figure 2 (pages 4-5).

Appropriate correction is required.

Drawings

Figures 1-5 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

The drawings are objected to because there is no description of figure 2. (Specification, pages 4-5).

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 26 (fig. 4), 22 (figs. 8, 9), and 20 (figs. 10, 11).

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the

Art Unit: 2852

drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Kato et al. (JP 2002-116660).

Kato et al. disclose a toner cartridge for use in an electrophotographic imaging machine, including a photosensitive drum (2), process means, for example charger (10), acting upon the photosensitive drum (2), a rotating shaft (26) which extends through the whole length (2) of the drum along the drum's axis, and a mounting component, for example plate (25), which supports the photosensitive drum (2) on the shaft (26), the mounting component (25) providing electrical continuity between the inside surface of the photosensitive drum (2) and the shaft (26). See abstract, lines 1-3.

Regarding claim 2, the shaft supports the photosensitive drum at both ends. See [0012].

Regarding claim 5, the shaft (26) is circular in cross section.

Art Unit: 2852

Claims 1-5 and 7-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Noda et al. (US 6,400,914).

Noda et al. disclose a toner cartridge for use in an electrophotographic imaging machine, including a photosensitive drum (7d) in figure 11, process means, for example charging roller (8), acting upon the photosensitive drum (7d), a rotating shaft (24) in figure 47 which extends through the whole length of the drum (7d) along the drum's axis, and a mounting component, grounding plate (118) which supports the photosensitive drum (7d) on the shaft (24), the mounting component (118) providing electrical continuity between the inside surface of the photosensitive drum (7d) and the shaft (24).

Regarding claim 2, the shaft (24) supports the photosensitive drum at both ends.

Regarding claim 3, the photosensitive drum (7d) rotates at the same speed as the shaft.
See col. 28, lines 6-23.

Regarding claim 4, the shaft is rotatably mounted in a casing of the toner cartridge, as shown by figure 4.

Regarding claim 5, the main body of the shaft (24) is circular in cross section, as shown by figure 47.

Regarding claims 7 and 8, projection (37a) of the shaft is of substantially triangular cross section, and the shaft is twisted along the axial length, for example, as shown by figure 52.

Regarding claim 9, gear (43) is a driving component, wherein the shaft is arranged to receive a rotational driving force at one end from a driving component in the host machine which is coaxial with the shaft.

Art Unit: 2852

Regarding claim 10, motor (61) is a driving component, wherein the shaft is arranged to receive a rotational driving force at one end from a driving component in a host machine which has an axis offset from the shaft axis and where the drive is transmitted from the driving component to the shaft by a gear train.

Regarding claim 11, the shaft supports gears, for example gears (43, 7b, 7n) as shown in figure 12, at either end and connects them such that they are rotatably locked with one another.

Regarding claim 12, the gear at one end (43) is driven by drive means (61) external to the cartridge and the gear (7b) at the other end drives a component which is external to the toner cartridge, a developing roller.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Noda et al. (US 6,400,914) in view of Kawai et al. (US 6,336,018).

Noda et al. disclose the electrophotographic imaging machine, but do not disclose that the shaft has a substantially square cross section.

However, Kawai et al. disclose a similar machine and a shaft having various shapes including a square cross section. See col. 21, lines 7-15.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the shaft of Noda et al. with the square cross section taught by Kawai et al. to produce a large contact surface for providing a drive force to the shaft. See col. 21, lines 25-34. Kawai et al. also shows equivalent shapes identical to that of Noda et al. See figures 28-31.

Contact Information

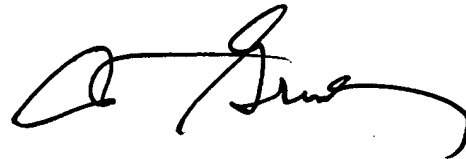
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan Gleitz whose telephone number is (571) 272-2134. The examiner can normally be reached on Monday-Friday between 9:00AM and 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur Grimley can be reached on (571) 272-2136. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2852

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

rg

A handwritten signature in black ink, appearing to read 'A. Grimley', with a stylized, flowing script.

Arthur T. Grimley
Supervisory Patent Examiner
Technology Center 2800